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MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

Annual Report

1989 - 1990

August 1990

Government of Canada Gouvernement du Canada

Government of Manitoba Gouvernement du Manitoba

91-06754/

CANADA-MANITOBA
AGREEMENT RESPECTING THE CONSTRUCTION OF
FLOOD PROTECTION PROJECTS IN MANITOBA

1577 Dublin Avenue
Winnipeg, Manitoba
R3E 3J5

August 31, 1990

The Honourable Robert R. de Cotret
Minister
Department of the Environment
Ottawa, Ontario
K1A OH3

The Honourable Harry Enns
Minister
Department of Natural Resources
Winnipeg, Manitoba
R3C OV8

Dear Ministers:

I am pleased to present the eighth Annual Report of the Implementation Committee for the administration of the Canada-Manitoba Agreement Respecting the Construction of Flood Protection Projects in Manitoba. This report covers the work undertaken during the period April 1, 1989 to March 31, 1990.

During the year, the pumping station and gravity outlet were completed at Ste. Rose du Lac and the flood protection works at the Souris water treatment plant were also completed. The international boundary dyke at Emerson, Manitoba and Noyes, Minnesota as well as the sheet piling dyke extension at Emerson were completed. Construction of the north closure dyke at St. Adolphe was initiated.

Total expenditures to March 31, 1990 under the agreement have totalled $6,608,312.27. During the reporting period expenditures of $690,349.14 were eligible for cost sharing under the agreement. Of this amount 45 percent or $310, 657.11 was Canada's share and 55 percent or $379,692.03 was Manitoba's share.

The agreement which expired on March 31, 1989 was amended and signed, and provides for an extension of the agreement to March 31, 1991.

Yours truly,

R D Bjonback

Dr. R. D. Bjonback
Chairperson
Implementation Committee

CANADA-MANITOBA
AGREEMENT RESPECTING FLOOD PROTECTION PROJECTS IN MANITOBA

ANNUAL REPORT
FOR
THE PERIOD
APRIL 1, 1989 TO MARCH 31, 1990

Environment Canada
Inland Waters Directorate
Western and Northern Region
1901 Victoria Avenue
Regina, Saskatchewan
S4P 3R4

Province of Manitoba
Department of Natural Resources
Water Resources Branch
1577 Dublin Avenue
Winnipeg, Manitoba
R3E 3J5

July 1990

TABLE OF CONTENTS

		Page
1.	Introduction	1
2.	Organization	2
3.	Progress	3

TABLE

1. Canada-Manitoba Agreement Respecting Flood Protection Projects - Expenditures for 1982-90

APPENDICES

A. Location of Communities in the Canada-Manitoba Agreement Respecting Flood Protection Projects

B. Location Plans of the Flood Protection Projects

MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

On March 10, 1983 the Governments of Canada and Manitoba signed "An Agreement Respecting the Upgrading of Ring Dykes in Certain Communities in the Red River Valley." This Agreement provided for the upgrading of the existing dyking systems of eight communities in the Red River Valley to provide flood protection to the one percent flood level. The agreement was amended on May 22, 1985 to provide for additional funding of $1.6 million to include flood protection works for Ste. Rose du Lac and the Souris Water Treatment Plant. The title of the agreement was changed to reflect the inclusion of the communities of Ste. Rose du Lac and Souris which are not located in the Red River Valley. The amended Canada-Manitoba Agreement Respecting Flood Protection Projects in Manitoba terminated on March 31, 1989. Some of the projects under the agreement were not completed by March 31, 1989. Court action associated with the expropriation of land delayed the project at Ste. Rose du Lac and negotiations with the U.S. Army Corps of Engineers delayed the construction of the international section of the dyke at Emerson-Noyes. Problems with regard to cost sharing between the Province and the R.M. of Ritchot were also encountered at St. Adolphe with regard to the north closure dyke location. A portion of the earthen dyke at Emerson was removed and replaced by a sheet piling dyke to reduce the load on the river bank which was showing signs of movement. An amending agreement was signed on September 28, 1989 providing a two year extension to March 31, 1991 and additional funding of $800,000.

1. Introduction

The seventh annual report reviews work activities and programs under the Canada-Manitoba Agreement Respecting Flood Protection Projects during the period from April 1, 1989 to March 31, 1990.

The Agreement provides up to $6.9 million to improve the existing ring dykes at Emerson, Letellier, Dominion City, St. Jean Baptiste, Morris, Rosenort, Brunkild, St. Adolphe, Ste. Rose du Lac and at the Souris Water Treatment Plant. The works are designed to protect against a one percent flood; a flood that has a probability of occurrence of one percent in any year. The costs of the works undertaken under this agreement are shared 45 percent by Canada and 55 percent by Manitoba. Manitoba has instituted agreements with the eight municipalities in the Red River Valley to secure local cost-sharing which includes

a contribution of five percent of the capital costs to upgrade the dyking systems from the 1950 flood level to the one percent flood level, and a contribution of 25 percent of the annual maintenance costs. In lieu of 25 percent of the annual maintenance costs, the communities will be responsible for grass mowing as well as a fixed annual payment to the Province for pump replacement. Manitoba has also signed an agreement with the Turtle River Conservation District for the works to be constructed at the Village of Ste. Rose du Lac for a contribution of five percent of the capital works and 25 percent of annual maintenance costs, and with the Town of Souris for five percent of the capital cost and the Town will be totally responsible for the maintenance of the dyking system.

The communities are shown on the location map in Appendix A. Location plans for the dyking systems are shown in Appendix B.

2. Organization

Under the terms of the Agreement an Implementation Committee was established consisting of one member appointed by the Minister of the Environment for Canada and one member appointed by the Minister of Natural Resources for Manitoba. On March 31, 1990 the Committee consisted of:

Canada

Dr. R. D. Bjonback
Chief
Water Planning and Management
Western and Northern Region
Inland Waters Directorate
Environment Canada

Manitoba

Mr. L. J. Whitney
Executive Director
Water Resources Branch
Department of Natural Resources

For the period from April 1, 1989 to March 31, 1990, Dr. R. D. Bjonback served as Chairman and Mr. G. Felton of Inland Waters Directorate served as Secretary.

The Implementation Committee met on June 13, 1989 and on February 27, 1990.

3. **Progress**

Significant progress was made on the dyke upgrading for the communities during the 1989-90 fiscal year. The pumping station, gravity outlet and internal drainage were completed at Ste. Rose du Lac leaving only some clean-up activities for the following year. The dyke upgrading around the Souris water treatment plant was completed. The international segment of the dyke at Emerson-Noyes was completed, and the earthen dyke in Emerson that was indicating possible failure was removed and replaced with a sheet-piling dyke. Construction started on the closure dyke at St. Adolphe. The following is the detailed progress report on the communities for the 1989-90 fiscal year.

Emerson - The construction of the dyke around Noyes, Minnesota and the international boundary dyke on the south side of Emerson were completed. The construction of the section of sheet piling dyke to replace the 300 metres (400 feet) of earthen dyke adjacent to the hospital and senior citizens home which showed failure cracks in 1988, was completed. Expenditures for the year were $199,436.80. Manitoba expended an additional $35,652.43 for lands not cost-shareable under the agreement.

Letellier - Complete. No expenditures during 1989-90.

Dominion City - No work was undertaken. No expenditures during 1989-90.

St. Jean Baptiste - Complete. No expenditures during 1989-90.

Morris - Complete. No expenditures during 1989-90.

Rosenort - Complete. No expenditures during 1989-90.

Brunkild - Complete. No expenditures during 1989-90.

St. Adolphe - With the location of the north closure dyke finalized the construction of the closure dyke was started in the late fall of 1989 and about 70% of the dyke was completed. No claims were submitted to the federal government for St. Adolphe and an audit adjustment of $102,318.60 was applied to credit the federal government for charges that were cost shared

but were not eligible under the agreement. The Province underwent lengthy negotiations with the local government for the location of the north closure dyke at St. Adolphe. The result of these negotiations was that the R.M. of Ritchot signed an agreement with the Province to cover the additional cost of relocating the north closure dyke to include developable land. The work has not been completed and hence the proportioning of the costs between the three parties has not been undertaken.

Ste. Rose du Lac - The pumping station and internal drainage system were completed. The only work remaining under the agreement is some clean-up and seeding to be done in the next fiscal year. Payment for most of the remaining expropriated right-of-way was made. Expenditures for the year were $587,201.85

Souris Water Treatment Plant - The project was completed and some adjustments to the dyke were undertaken to improve accessability for a landowner who uses the dyke as the only means of access. Expenditures for the year were $6,029.09.

Total Expenditures - Expenditures eligible for cost sharing under the agreement for the 1989-90 fiscal year totalled $690,349.14.

TABLE 1

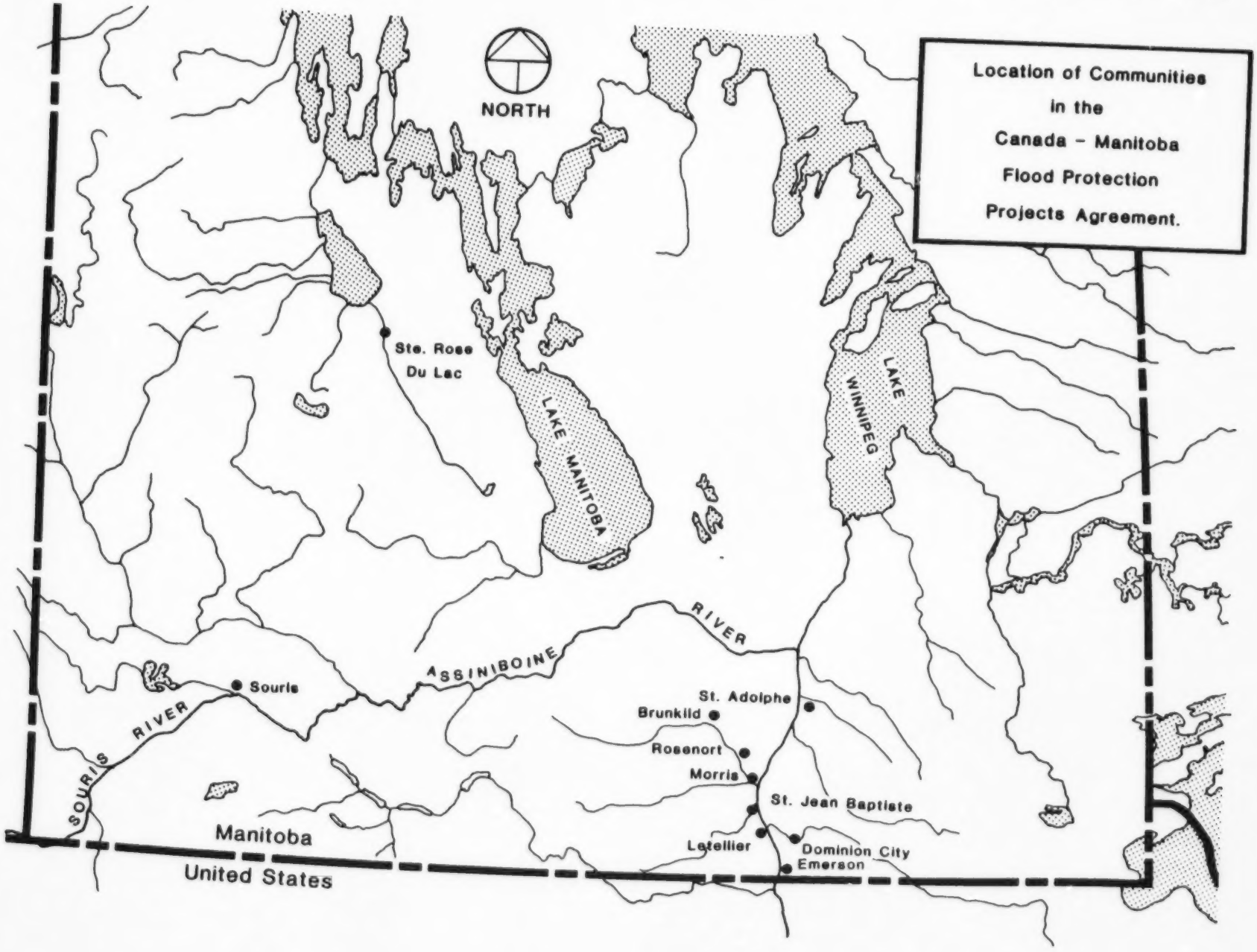
CANADA-MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT
EXPENDITURES FOR 1982-90

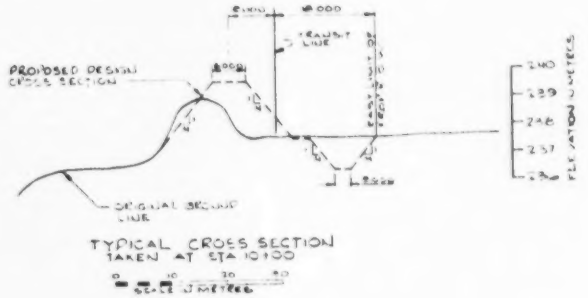
Community	1982/83*	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	Accumulative Total
Emerson		$3,834.76	$7,356.01	$114,675.92	$177,281.96	$129,477.36	$259,703.61	$199,436.80	$891,766.42
Letellier**		7,367.42	65,599.26	335,539.53	94,670.23	6,322.20			509,498.64
Dominion City				19,029.59	33,453.92	2,773.19			55,256.70
St. Jean Baptiste**	$198,128.74	369.20	48,473.89	287,960.25	121,587.67	15,690.80			672,210.55
Morris**	131,004.39	1,045.11	150,186.27	48,808.05	95,119.13	28,186.65			454,349.60
Rosenort**	10,209.81	4,369.11	23,293.09	178,840.29	48,289.32	6,675.69			271,677.31
Brunkild**		177,837.07	259,984.61	59,928.85	34,978.79	5,471.38			538,200.70
St. Adolphe***		136,140.54	132,563.68	27,271.96	21,328.18	7,179.84	141,597.20	[102,318.60]	363,762.80
Ste. Rose du Lac				2,645.00	13,118.04	497,215.16	1,618,392.40	587,201.85	2,718,572.45
Souris						17,964.15	109,023.86	6,029.09	133,017.10
TOTAL	$339,342.94	$330,963.21	$687,456.81	$1,074,699.44	$639,827.24	$716,956.42	$2,128,717.07	$690,349.14	$6,608,312.27

* During 1982-83 there were no funds expended because of the late signing of the agreement. The expenditures indicated are for those retroactive costs incurred by the Province prior to the agreement signing as allowed under clause 4(5) of the agreement.

** The works required under the agreement are complete and the costs indicated are final costs.

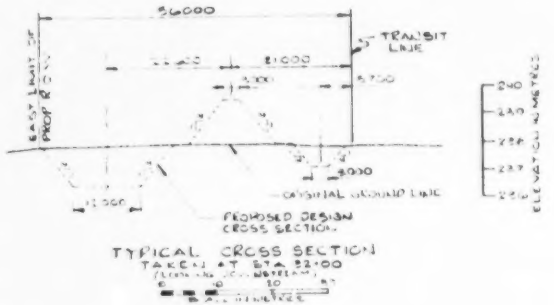
*** Audit adjustment credit for costs not shareable under the agreement as well as costs that will be apportioned after the work under the north closure dyke contract is completed.


Location of Communities
in the
Canada - Manitoba
Flood Protection
Projects Agreement.
NORTH
Ste. Rose
Du Lac
LAKE MANITOBA
LAKE
WINNIPEG
RIVER
ASSINIBOINE
Souris
SOURIS RIVER
St. Adolphe
Brunkild
Rosenort
Morris
St. Jean Baptiste
Letellier
Dominion City
Emerson
Manitoba
United States



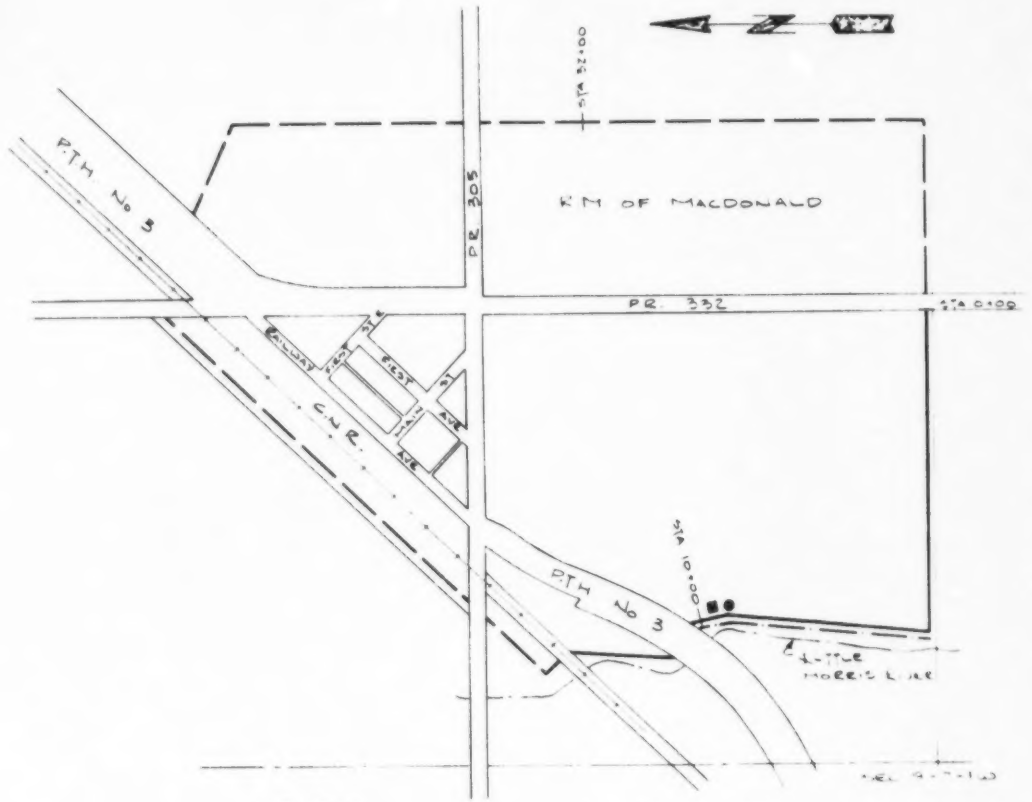
TYPICAL CROSS SECTION
TAKEN AT STA 10+00

SCALE IN METRES



TYPICAL CROSS SECTION
TAKEN AT STA 32+00

SCALE IN METRES



LEGEND

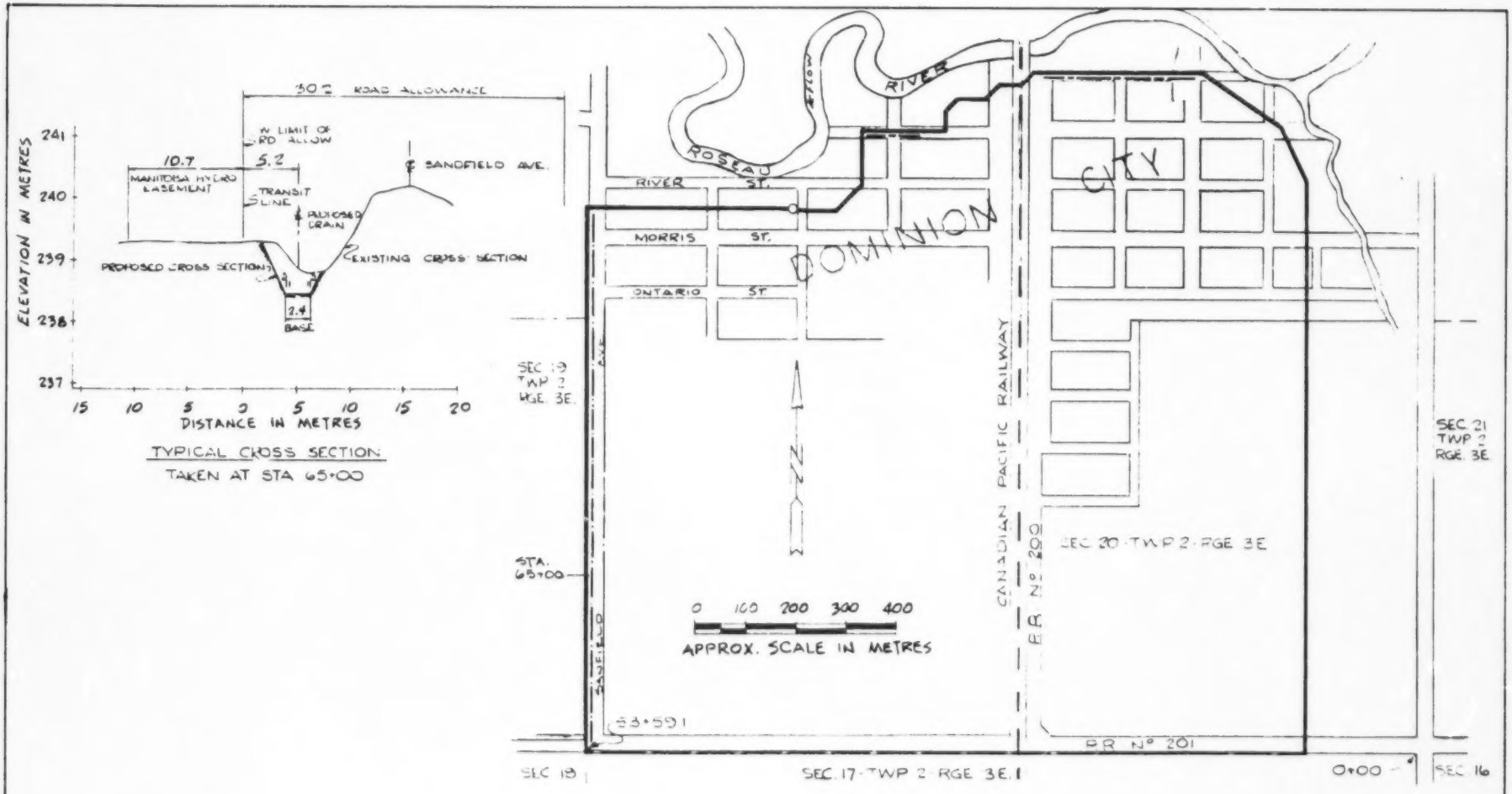
- LOCATION OF PROPOSED PERMANENT DYKING SYSTEM
- PROPOSED PUMPING STATION
- PROPOSED GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY
- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM

SCALE IN METRES

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF BRUNKILD



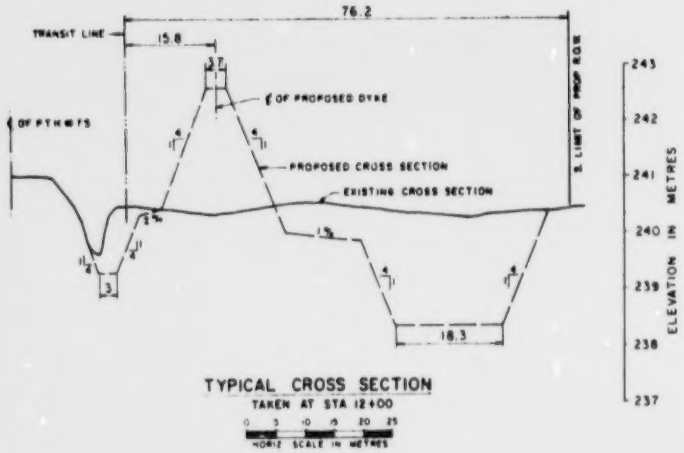
LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- EXISTING DYKE REQUIRING NO IMPROVEMENTS
- O EXISTING GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY
- LOCATION OF PROPOSED PAVED SURFACE ROADWAY

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF DOMINION CITY



TYPICAL CROSS SECTION
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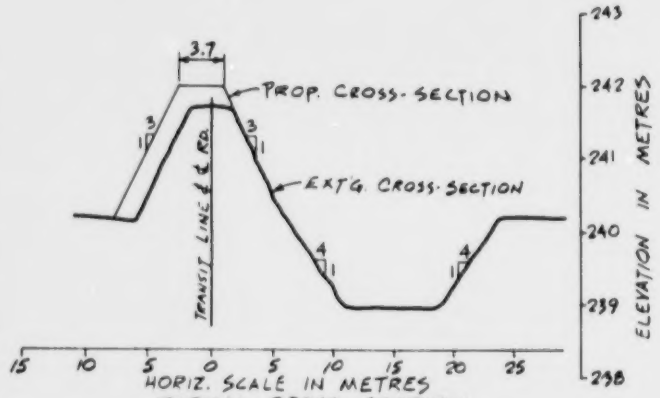


TYPICAL CROSS-SECTION
TAKEN AT STA 75+00

LEGEND

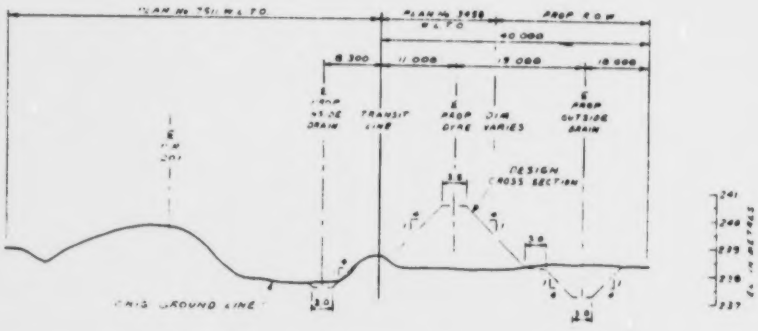
- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM
- LOCATION OF PROPOSED NEW DYKES
- EXISTING PUMPING STATION
- EXISTING GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR TOWN OF EMERSON

PREPARED | DRAWN F.R. | CHECKED | SUBMITTED | APPROVED | SCALE AS SHOWN | DATE 81 11 27 | SHEET | FILE NO.



CROSS SECTION AT STA 2+20

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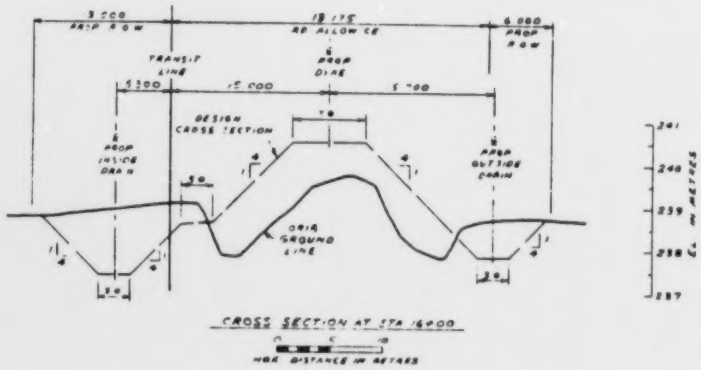
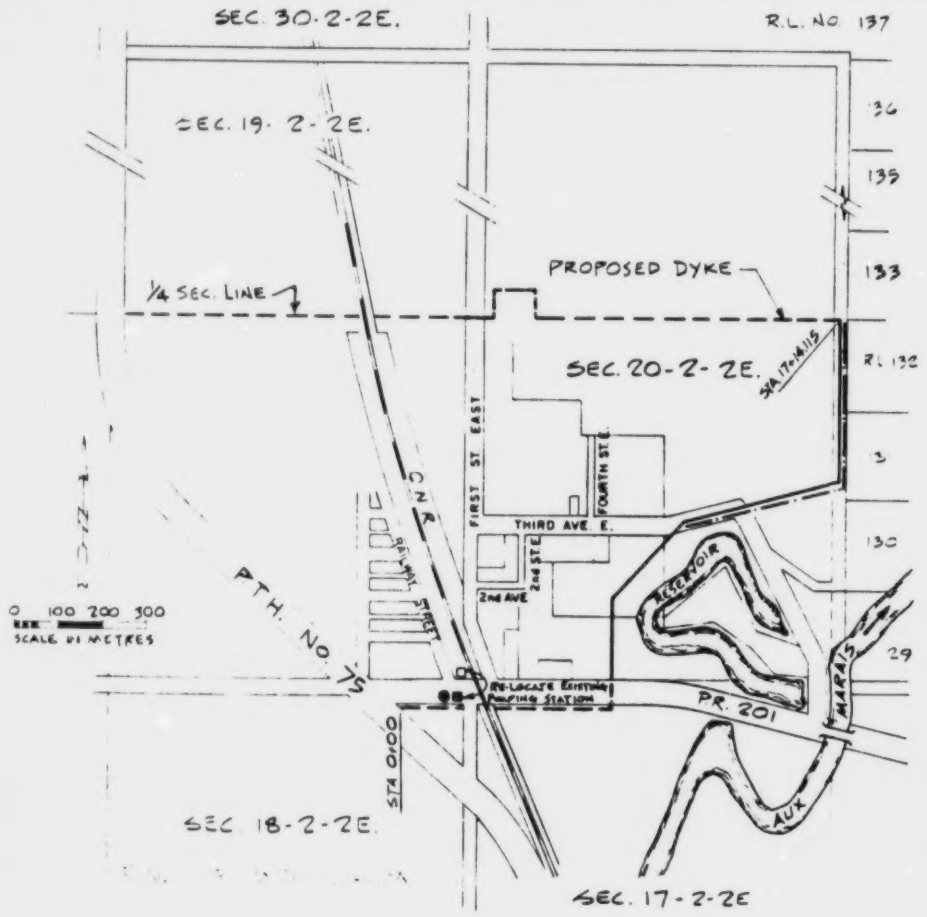


CROSS SECTION AT STA 16+00

HOR DISTANCE IN METRES



LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM
- LOCATION OF PROPOSED NEW DYKING.
- EXISTING PUMPING STATION
- RE-LOCATED PUMPING STATION
- PROPOSED GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

PREPARED | DRAWN F.R. | SUBMITTED | APPROVED
CHECKED

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF LETELLIER

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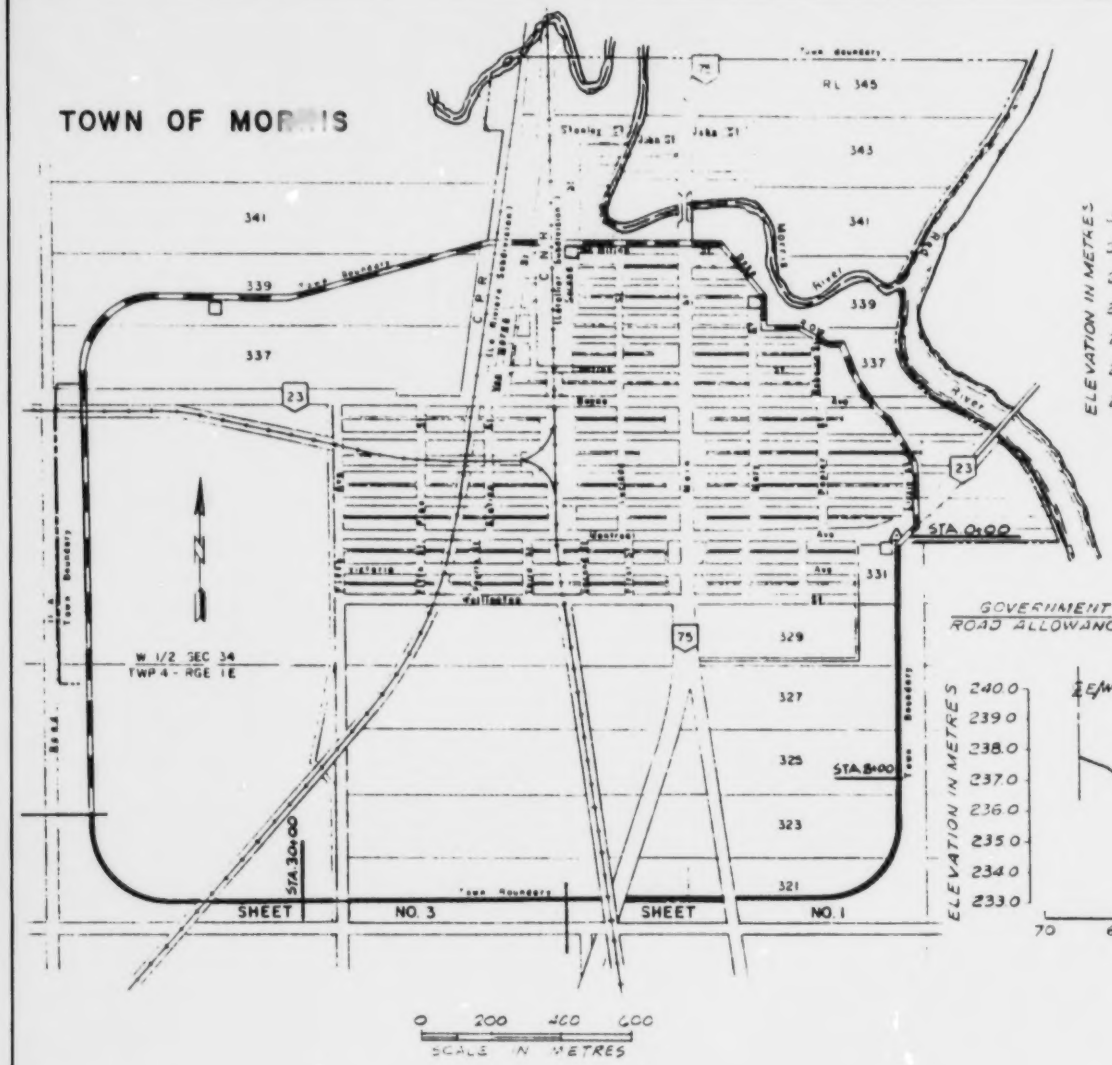

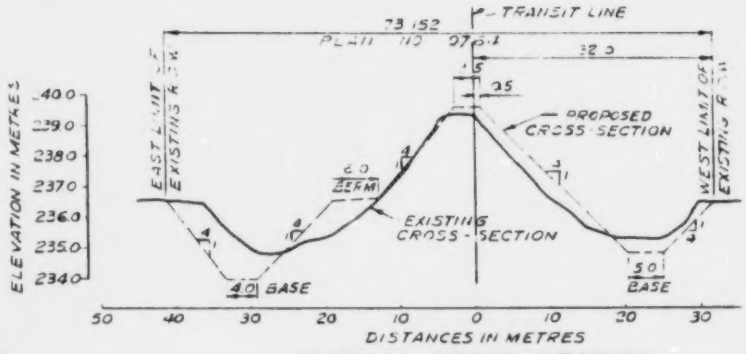

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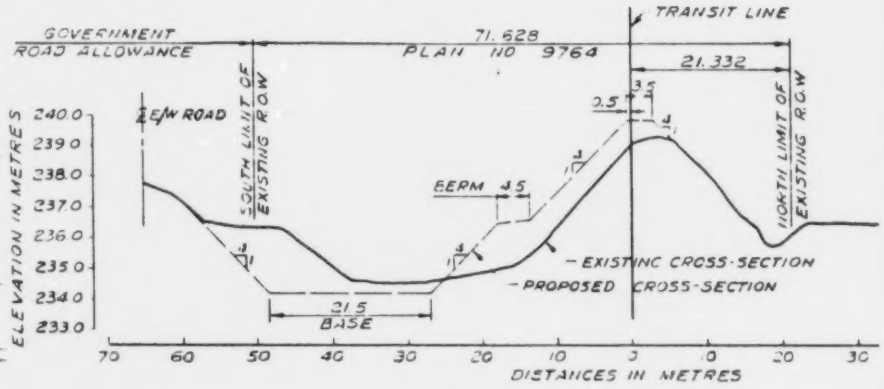

TYPICAL CROSS-SECTION

(TAKEN AT STA 30+00)

LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM
- EXISTING DYKES NOT REQUIRING IMPROVEMENT
- □ EXISTING PUMPING STATION

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

PREPARED | DRAWN F.R. | CHECKED | SUBMITTED | APPROVED

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR TOWN OF MORRIS

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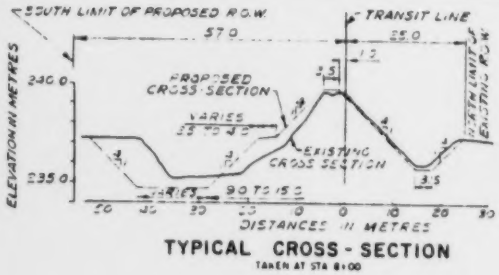

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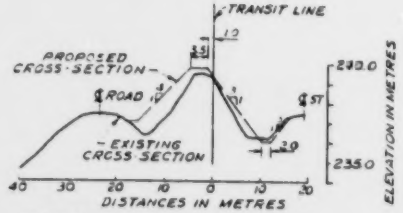

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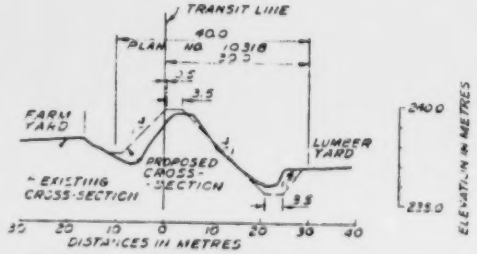

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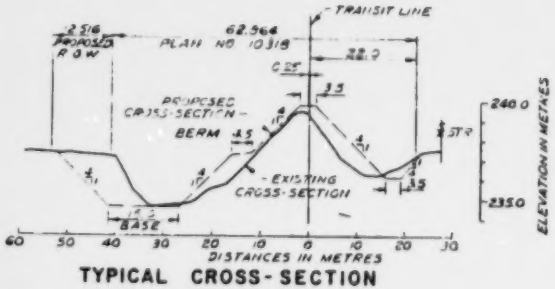

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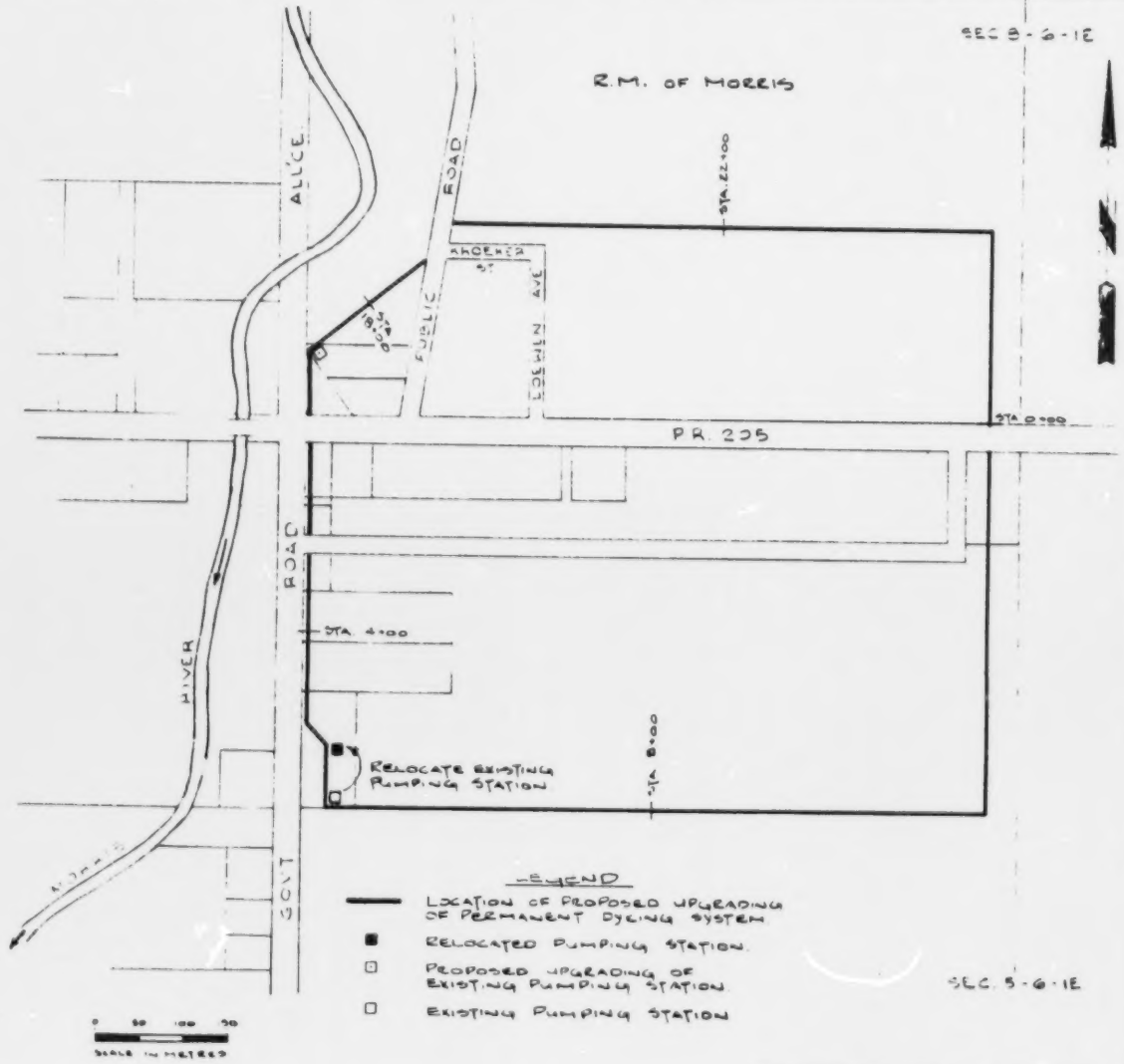
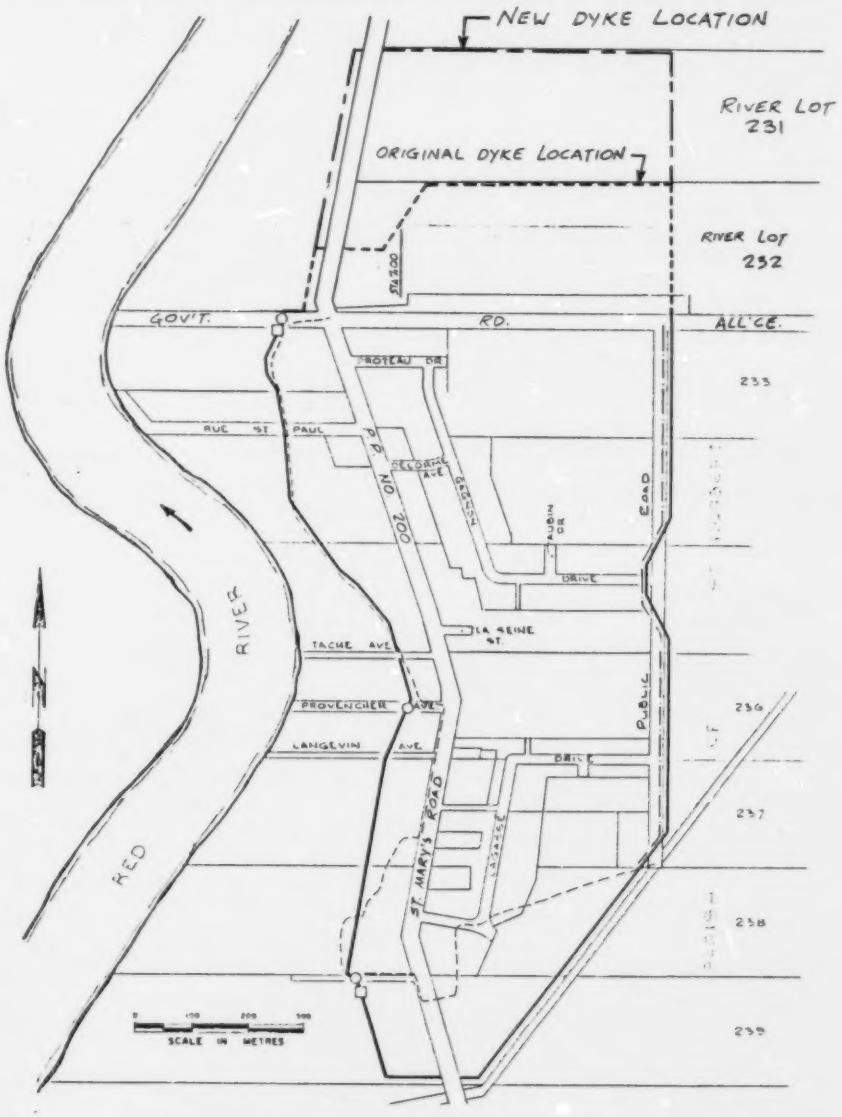
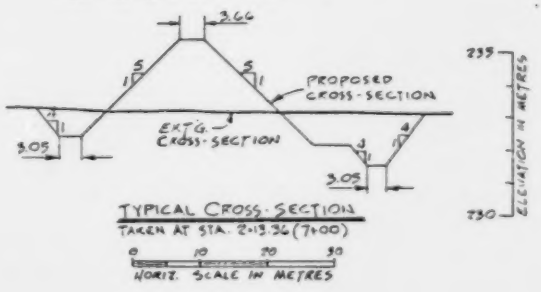


CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF ROSENORT





TYPICAL CROSS-SECTION
TAKEN AT STA. 2+13.36 (7+00)

LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- LOCATION OF PROPOSED NEW DYKE.
- EXISTING PUMPING STATION.
- EXISTING GRAVITY OUTLET CHAMBER.
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

DRAWN F.B.R.
CHECKED
PREPARED
SUBMITTED
APPROVED

Manitoba Natural Resources
Water Resources

LOCATION PLAN AND TYPICAL CROSS SECTION FOR VILLAGE OF ST. ADOLPHE

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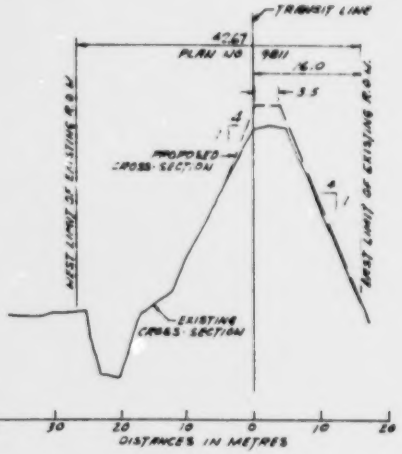
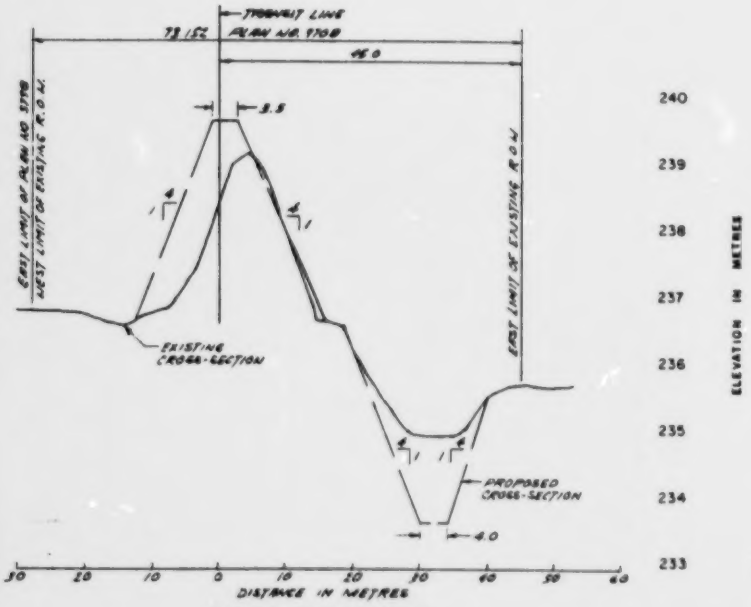


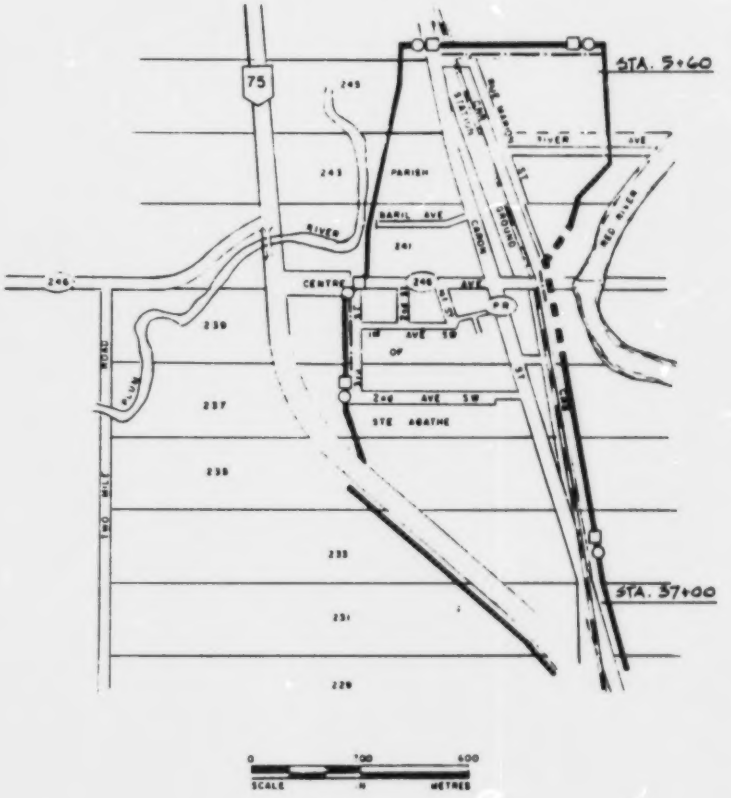
TYPICAL CROSS-SECTION

TAKEN AT STA 5+60



TYPICAL CROSS-SECTION

TAKEN AT STA 37+00



LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKE SYSTEM.
- LOCATION OF PROPOSED NEW DYKE
- EXISTING PUMPING STATION
- EXISTING GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

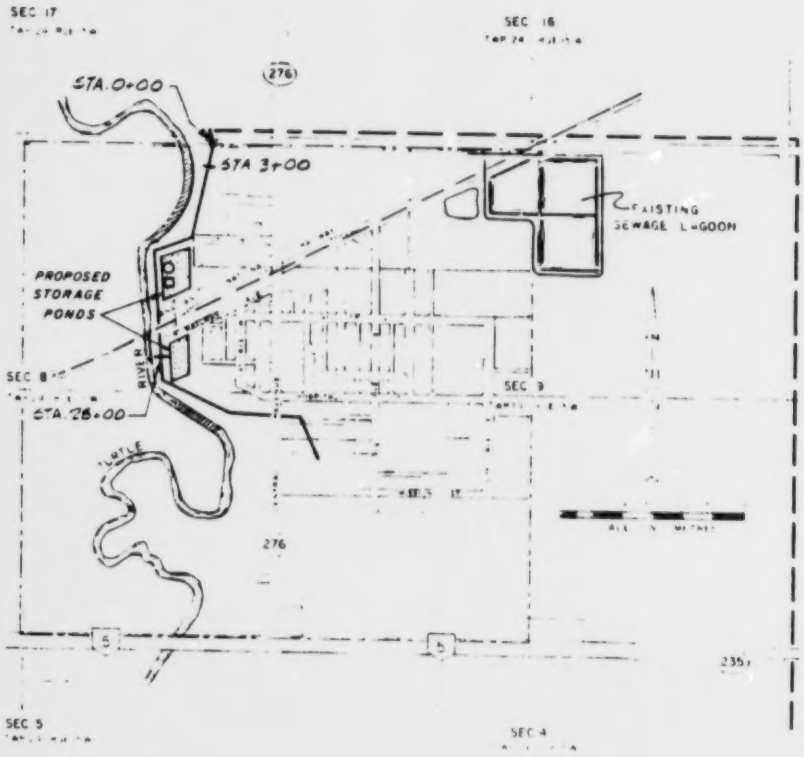
PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

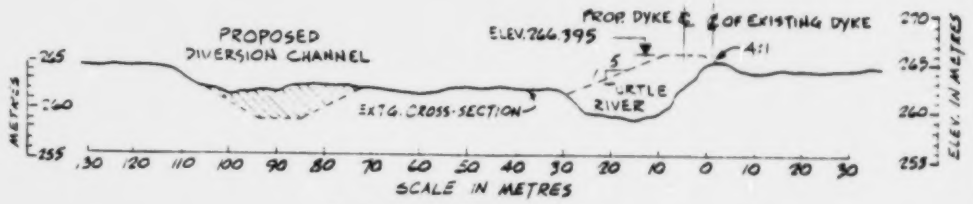
PREPARED | DRAWN ER | CHECKED | SUBMITTED | APPROVED

LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF ST. JEAN BAPTISTE

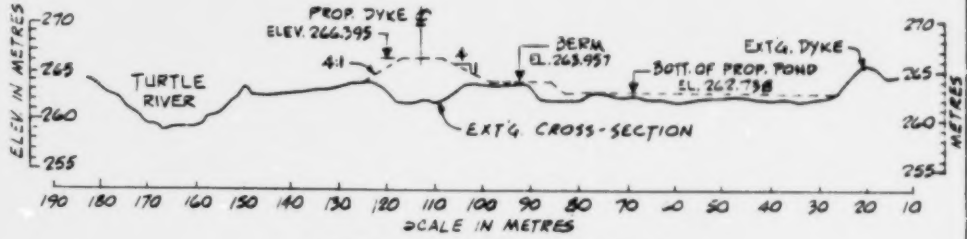
SCALE AS SHOWN | DATE | SHEET | FILE NO

VILLAGE OF
STE. ROSE DU LAC





TYPICAL CROSS-SECTION
(TAKEN AT STA. 3+00)



TYPICAL CROSS-SECTION
(TAKEN AT STA. 28+00)

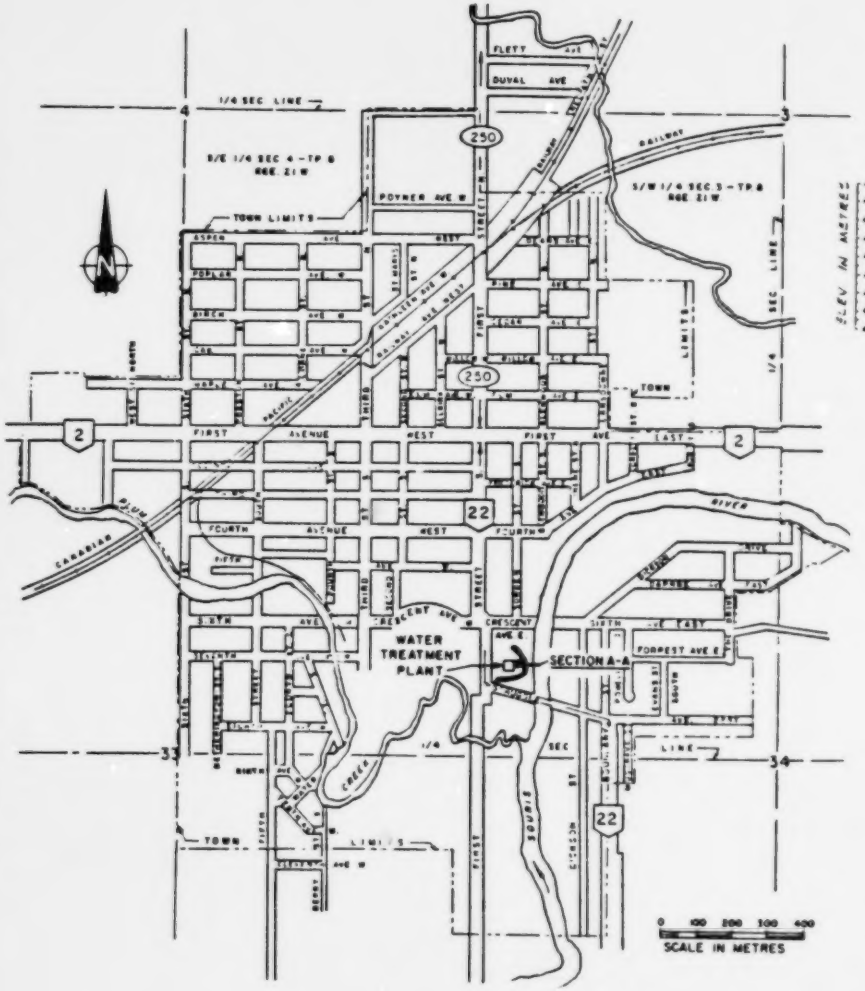
LEGEND

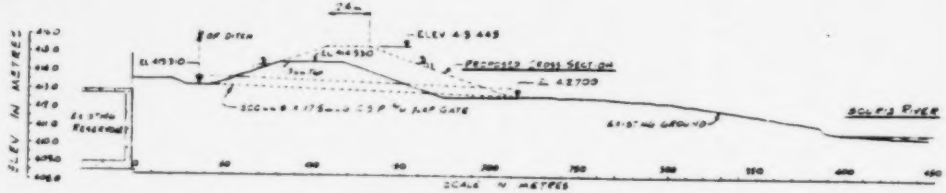
——— – LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM
– – – – LOCATION OF PROPOSED NEW DYKE
□ – PROPOSED PUMPING STATION
○ – PROPOSED GRAVITY OUTLET CHAMBER

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

LOCATION PLAN
AND
TYPICAL CROSS SECTIONS
FOR
VILLAGE OF STE. ROSE DU LAC





SECTION A-A - TYPICAL CROSS-SECTION

LEGEND

——— - LOCATION OF PROPOSED UPGRADING OF EXISTING DYKE

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR TOWN OF SOURIS